



U.S. Pat. Serial No. 10/085,373

**New Title: "A Multiple-Axis Linearly-Propelled Rotating Sensor Apparatus"**  
**Claims after Amendment of 9 May 2003**

1. A movable sensor apparatus, comprising:
  - a movable housing;
  - at least one supporting extension wherein each said supporting extension is rotatably affixed to said housing about a first axis;
  - at least one sensor that is rotatably affixed to one of said at least one supporting extension about a second axis different from said first axis;
  - a linear propulsion mechanism attached to said housing whereby said housing may be moved over the ground;
  - a triggering unit electrically coupled to each of said at least one sensor and capable of separately activating each of said at least one sensor; and,
  - a sampling unit electrically coupled to each of said at least one sensor and capable of receiving output from each of said at least one sensor.
2. The movable sensor apparatus of Claim 1 wherein said sensor is a magnetometer.
3. The movable sensor apparatus of Claim 1 wherein said sensor is an optical camera.
4. The movable sensor apparatus of Claim 1 wherein said sensor is an electromagnetic induction sensor.
5. The movable sensor apparatus of Claim 1 wherein said sensor is a sonar sensor.
6. The movable sensor apparatus of Claim 1 wherein each said supporting extension rotates at a constant rate of rotation.
7. The movable sensor apparatus of Claim 6 wherein each said sensor rotates at a constant rate of rotation that is equal in magnitude and opposite in direction to said constant rate of rotation of each said supporting extension.
8. The movable sensor apparatus of Claim 1 further comprising a position indicator coupled to at least one said supporting extension and said linear propulsion mechanism.
9. The movable sensor apparatus of Claim 8 further comprising a data storage device for storing sensor data collected from each of said at least one sensor and position data collected from said position indicator.
10. A movable sensor apparatus, comprising:
  - a movable housing;
  - a first supporting extension rotatably affixed to said housing about a first axis;

a second supporting extension rotatably affixed to said housing about said first axis;

a first sensor that is rotatably affixed to said first supporting extension about a second axis different from said first axis;

a second sensor that is rotatably affixed to said second supporting extension about a third axis different from said first axis and said second axis;

a linear propulsion mechanism attached to said housing whereby said housing may be moved over the ground;

a triggering unit electrically coupled to said first sensor and said second sensor and capable of separately activating said first sensor and said second sensor; and,

a sampling unit electrically coupled to said first sensor and said second sensor and capable of receiving output from said first sensor and said second sensor.

11. The movable sensor apparatus of Claim 10 wherein said first sensor is a radar sensor and said second sensor is a magnetometer.
12. The movable sensor apparatus of Claim 10 wherein said first sensor is a radar sensor and said second sensor is an optical camera.
13. The movable sensor apparatus of Claim 10 wherein said first sensor is a radar sensor and said second sensor is an electromagnetic induction sensor.
14. The movable sensor apparatus of Claim 10 wherein said first sensor is a radar sensor and said second sensor is a sonar sensor.
15. The movable sensor apparatus of Claim 10 wherein said first sensor is a magnetometer and said second sensor is an optical camera.
16. The movable sensor apparatus of Claim 10 wherein said first sensor is a magnetometer and said second sensor is an electromagnetic induction sensor.
17. The movable sensor apparatus of Claim 10 wherein said first sensor is a magnetometer and said second sensor is a sonar sensor.
18. The movable sensor apparatus of Claim 10 wherein said first sensor is an optical camera and said second sensor is an electromagnetic induction sensor.
19. The movable sensor apparatus of Claim 10 wherein said first sensor is an optical camera and said second sensor is a sonar sensor.
20. The movable sensor apparatus of Claim 10 wherein said first sensor is an electromagnetic induction sensor and said second sensor is a sonar sensor.